

## ABSTRACT

A method for holographic recording and reproducing includes a recording process and a reproducing process. In the recording process, a coherent reference beam is spatially modulated in accordance with information to be recorded to generate a signal beam, and the signal beam is converged. The converged signal beam enters and passes through a recording medium made of a photosensitive material. A diffraction grating area according to a light interference pattern is created in a portion where a 0th-order beam and a diffraction beam of the signal beam interfere with each other inside the recording medium. In the reproducing process, a reproduced wave corresponding to the signal beam is generated by illuminating the diffraction grating area with the reference beam.